P3 – VIDEO STREAMING

### Ex1:

In this section, I want to explain how the command that I used works, as I got it from the internet (<https://ottverse.com/hls-packaging-using-ffmpeg-live-vod/>).

The first part resizes the video in multiple resolutions so that when we stream such video, it can select between these resolutions depending on the quality of the network and keep delivering even if such quality is pretty low.

In the next section, we transcode the video to multiple bitrates (whichever we desire), so that we can then create the HLS playlists. Here we can choose the type of playlist we want (Video on Demand) in this case, the segment length, type, their name, etc.

Finally, I have also created a master playlist to list the playlist of the individual variants that have been packaged using HLS. Doing so, I managed to mimic the example shown in class (with different names and resolutions):

Timeline

Description automatically generated

### Ex4:

For this exercise I looked into a bunch of different platforms using google chrome and found some that were encrypted and some that were not. For the ones that were encrypted, YouTube was the only one that I was able to find if it was HLS or DASH

A screenshot of a computer

Description automatically generated with medium confidence

As we can see, it uses DASH and is encrypted because we cannot understand anything about it.

I also managed to find two different platforms that were not encrypted. The first one was Facebook, which uses DASH since I was able to find an MPD file:

Text

Description automatically generated

This file is quite different to the one I obtained with the second exercise but one can see that the structure is quite similar (and it also states that it is an MPD at the beginning)

Lastly, I also checked Twitch, and I found that it uses HLS because a lot of the files that popped up in Developer tools – Network were “.m3u8”. Here is a screenshot of such files:

Graphical user interface, text

Description automatically generated

Text

Description automatically generated

One can also see that the text is the same as the one we got in the first exercise when creating the HLS container.